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"Peridia clausa sphaerias simulant." L. D. de Schweinitz, Synopsis Fungorum Carolinae Superioris (excerpta), p. 43. No. 457. 1822. (Schrift. d. Nat. Gesellschaft zu Leipzig.)

60. *Uromyces caladii* (Schw.) Farl.

Uredo caladii Schw.

Uredo and Teleutospores.

On *Arisaema triphyllum* (L.) Torr.

West Alexandria, Preble Co., O., July 4, 1901.

Coll. W. A. Kellerman.

"*Uredo caladii* Sz.

"*U. punctiformis* solitaria, maculae magnae lutescenti insidens, pulvere fusco.

"In aversa pagina foliorum Caladii frequens. Primum clausa, demum pulverem spargentia peridia." L. D. de Schweinitz, Synopsis Fungorum Carolinae Superioris (excerpta), p. 45. No. 480. 1822. (Schrift. d. Nat. Gesellschaft zu Leipzig.)

NEW SPECIES OF FUNGI FROM VARIOUS LOCALITIES.

J. B. ELLIS AND B. M. EVERHART.

AECIDIUM JACQUEMONTIAE E. & E. On leaves of *Jacquemontia pentantha*. Yucatan, Mexico. Com. Dr. Chas. F. Millspaugh, No. 1192.

Amphigenous, evenly scattered; aecidia hemispheric-erumpent, then flattened at the apex, finally open, deep cup-shaped with the margin erect and soon entire, about $\frac{1}{4}$ mm. diam., nearly slate color inside when dry, (color when fresh not seen); spores globose or angular, about 12μ diam. or ovate or elliptical, $12-15 \times 10-12 \mu$, episporule thin, contents granular, component cells of the aecidia subelliptical, about 15μ diam.

Cannot be the aecidium of *Puccinia opulenta* Speg. which has the aecidia in hypophylloous groups.

DOTHIORELLA RADICANS E. & E.—On dead stems of *Rhus toxicodendron* (the climbing var. *radicans*). Newfield, N. J. May 20, 1900.

Stromata small, about 1 mm. diam., bursting through the cuticle in a subseriate manner and confluent for 2-3 mm. Perithecia 3-12 in a stroma or sometimes scattered singly, hemispheric-prominent, about 1-3 mm. diam., rounded and obtuse at the apex, ostiolum inconspicuous; sporules ovate, pale, yellowish-brown, $10-13 \times 5-6 \mu$; basidia slender, about as long as the spores.

This differs from *D. rhoina* E. & E. (Torr. Bull. 27:55. 1900) principally in its sporules nearly twice as large.

CYTISPORA' PALLIDA E. & E.—(*Neocytispora pallida* E. & E. in Herb.). On dead fallen limbs of *Quercus tinctoria*. Newfield, N. J. Nov.-April, 1901-2.

Stroma membranaceuos, pallid-white and at first white-pulverulent, convex, 2-4 mm. diam., erumpent, loosely embraced by the ruptured epidermis, soon irregularly perforated above, multilocular, cells subovate; sporules numerous, allantoid, hyaline, $4\text{-}5 \times 1 \mu$, borne on dendroidly branched basidia, $4 \times 1\frac{1}{2}\text{-}2 \mu$.

This differs from the usual type of *Cytispora* but the essential characters are those of that genus. The specimens were found associated with *Polyporus pocula* (Schw.) Cke. with which it may be generically connected.

CONIOTHYRIUM JUNCI E. & E.—On *Juncus balticus* (dead scapes). Andrews, Oregon. Aug., 1901. Griffiths & Morris.

Perithecia scattered, imperfect, subcuticular, about $\frac{1}{4}$ mm. diam., visible through the thin cuticle as minute, black circles with a white spot in the center. Sporules globose, olivaceous, $1\frac{1}{2}\text{-}2 \mu$. diam., borne on fasciculate basidia. Simple or branched from the base, $12\text{-}15 \times 2 \mu$.

On account of the imperfectly developed perithecia, this approaches the Melanconiaceae.

DIPLODIA IVAICOLA E. & E.—On dead stems of *Iva xanthifolia*. Aberdeen, South Dakota. April, 1896. David Griffiths.

Perithecia scattered; 150-200 μ diam., subcuticular, raising the epidermis into small pustules which are pierced above by the papilliform osteolum which is soon perforated. Sporules oblong or oblong-elliptical, uniseptate, scarcely constricted, $10\text{-}16 \times 6\text{-}7 \mu$ yellowish-brown, obtuse at the ends.

ASCOCHYTA SMILACIS E. & E.—On living leaves of *Smilax hispida*. Yates, N. Y. (Fairman, 1512.)

Spots small (1-4 mm.), of irregular shape, dirty-white with a brown border or situated in a large brown space 1-2 cm. diam. Perithecia scattered over the spots, epiphyllous but mostly visible on both sides of the leaf, punctiform, black. Sporules elliptical, obtuse, smoky-hyaline, uniseptate but not constricted, $6\text{-}8 \times 4 \mu$.

This differs from the *Ascochyta* mentioned in the description of *Phyllosticta smilacis* E. & M. (in the North American *Phyllostictas*) in its smaller, smoky sporules.

SEPTORIA SPICULISPORA E. & E.—On leaves of *Euonymus*, Delaware (Commons).

Spots orbicular, 1-3 mm. diam., white with a purple margin; perithecia semiimmersed, epiphyllous, black, subglobose, $100\text{-}110 \mu$ diam. Sporules spiculiform, continuous, $15\text{-}20 \times 3\frac{3}{4}\text{-}1 \mu$.

S. euonymella Pass. and *S. euonymi-japonici* Pass. Both have sporules $2\frac{1}{2} \mu$ thick. *S. euonymi* Rabh. has spots scarcely margined, perithecia lenticular and sporules $1\frac{1}{2} \mu$ thick. This was issued in N. A. F. 2675 as *Phyllosticta euonymi* Sacc.

SEPTORIA PENTSTEMONICOLA E. & E.—On leaves of *Pentstemon gracilis*. Aberdeen, South Dakota, July, 1896. (David Griffiths.)

Spots subindefinite, 2-3 mm. diam., brown, soon confluent giving the leaf a dried up, dead appearance. Perithecia punctiform, minute (75μ), scattered over the leaf and not confined to the spots. Sporules filiform, slightly curved, faintly nucleolate, $30-45 \times 1-1\frac{1}{2} \mu$.

Differs from *S. pentstemonis* E. & E. in the character of the spots and in its longer sporules.

SEPTORIA CORYDALIS Ell. & Davis.—On leaves of *Corydalis glauca*, Vilas Co., Wis. July, 1901. (Davis No. 019.)

Spots white, transparent, definite, surrounded by a reddish-brown halo, roundish or irregular, 2-6 mm. diam. Perithecia few, black, visible on both sides of the leaf but more distinct above, sporules cylindrical, $3-5 \times 1-2 \mu$.

SEPTORIA LIATRIDIS Ell. & Davis.—On leaves of *Liatris spicata*, Racine, Wis. June, 1901. (Davis 013b) and *L. scariosa* (013).

Spots round or elliptical, 2-4 mm. diam., of a dirty brown color, with a narrow slightly raised margin, finally thin, white and transparent; perithecia innate, more prominent above, small $75-80 \mu$. Sporules filiform, continuous, hyaline, nearly straight, $20-30 \times 1\frac{1}{4}-1\frac{1}{2} \mu$.

ZYTHIA RHOINA E. & E.—On dead stems of *Rhus radicans*, Newfield, N. J. May, 1900.

Perithecia cespitose, ovoid, light yellow, $150 \times 200 \mu$, surface slightly granular-roughened, astomous, collapsing to cup-shaped, clustered on a rather soft, tubercular, yellowish stroma about 1 mm. diameter and outwardly not distinguishable from a *Nectria*. Sporules oblong-elliptical, hyaline, continuous or faintly uniseptate, $6-10 \times 2\frac{1}{2}-3\frac{1}{2} \mu$, on slender basidia mostly a little curved and permanently attached, $8-15 \mu$ long.

CYLINDROSPORIUM INFUSCANS E. & E.—On leaves of *Elymus condensatus*. Waitsburg, Wash. Oct. 1899. (Robt. M. Horner, No. 1406.)

Acervuli innate, black outwardly, elliptical, $100-110 \times 120-150 \mu$, erumpent above, seriate between the nerves of the leaf; conidia lanceolate-cylindrical, straight or slightly curved or bent, continuous or slightly curved; hyaline with a slight yellowish tinge, $40-55 \times 3-4 \mu$.

The fungus gives the upper side of the leaf a dark smoky hue, but there are no spots.

PESTALOZZIA MALI E. & E.—On apple tree leaves. Newfield, N. J. Aug. 18, 1900.

Spots circular, 1-3 mm. diam., white or cream color above with a narrow, purplish-brown margin, rusty-brown below; acervuli epiphyllous, innate-erumpent, sublenticular; conidia cylindrical, 5-septate, scarcely constricted, $20-25 \times 6-7 \mu$, the terminal cells conical and hyaline, intermediate cells brown, the apical cell with a single short (6-8 μ), oblique, hyaline bristle-like crest; basidia simple, slender, about as long as the conidia, the riper part remaining to the base of the spore which in this way becomes bicristate.

The conidia are not quite as broad as in *P. crataegi* E. & E. and there is no concentric arrangement of acervuli as in that species. The conspicuous spots in *P. mali* afford a striking and easily recognizable character. Often one or more of the light colored spots are included in a larger brown spot, thus giving the leaf a marble-like aspect.

RAMULARIA HYDROPHYLLI E. & E.—On *Hydrophyllum capitatum*. Blue Mts. Columbia Co., Wash. April 1900. (Robert M. Horner, 1494.)

Spots dark-brown, irregular in shape, 3-6 mm. long, mostly extending out to the margin of the leaf or occupying the tips; hyphae amphigenous, caespitose, hyaline, continuous, geniculate above and slightly toothed, $20-30 \times 5-7 \mu$, forming a loose white layer like *Peronospora*; conidia narrow-ovate, or elongated-clavate, rounded at each end, $20-30 \times 7-10 \mu$.

CERCOSPORA SIMULANS Ell. & Kellerm.—On leaves of *Falcata comosa*, Gauley Mts., W. Va. Aug. 1901. (Prof. W. A. Kellerman, 3775.)

Hypophyllous: hyphae in loose, spreading tufts, geniculate and faintly septate, brownish, $75-100 \times 3-4 \mu$, forming reddish-brown patch 2-3 mm. diam., leaf mottled above with corresponding whitish or reddish subindefinite spots subangular and partly limited by the veinlets of the leaf; conidia clavate-oblong, hyaline, 1-4 (mostly 3-) septate, $20-40 \times 4-6 \mu$.

Differs from *C. monoica* Ell. & Holw. on the same host, in its hypophyllous growth and shorter, broader conidia.

FUSARIUM SPARTINAE E. & E.—On leaves of *Spartina stricta*. Pacific Grove, Cal. July 1900. (Robt. M. Horner, 1488.)

Hyphae arising from a minute, tremelloid base, branching above, hyaline, forming a loose, flocculent, pale orange-colored growth on the lower side of the dead leaves; conidia terminal, oblong-elliptical or oblong-fusoid, straight, 1-3 septate, $12-15 \times 3-4 \mu$, ends mostly obtuse.

DIATRYPE MEGASTOMA E. & E.—*Jour Mycol.* I. p. 141, N. A. F. 1556, is the same as *Eutypella cerviculata* Fr.

Eutypella alpina E. & E.—*Proc. Phil. Acad.* 425. 1895, N. A. F. 3331, 3436 is also *Eutypella cerviculata* Fr.

LOPHIOTREMA OENOTHERAE E. & E.—Torr. Bull. 24:128. 1897. Specie⁷⁴⁵ found at Newfield, N. J., July 1901. Fully matured, have sporidia distinctly 3-septate or constricted at the septa, 15-20x5-6 μ .

PHYLLOSTICTA CLYPEATA E. & E.—On living limbs of *Pirus malus*. Corvallis, Oregon, May 1902. (A. B. Cordley.)

Spots discoid or shield-shaped, dull yellowish, $\frac{1}{2}$ -1 cm. diam., circular or elliptical, closely embraced by the upturned epidermis, which, however, soon shrinks away, leaving the margin partially free. Perithecia scattered on the spots, depressed-globose, slightly prominent, 150-200 μ diam. Sporules elliptical or sub-globose, hyaline, $3\frac{1}{2}$ -4x $2\frac{1}{2}$ -3 μ .

Apparently very injurious to the trees.

PHYLLOSTICTA VIRGINICA E. & E.—In N. A. F. 2830; is doubtless only a form of *P. destruens* Desm. This fact was recognized in preparing the copy for the "North American Phyllostictas," as shown by the reference under *P. destruens* on p. 15, but through some oversight was not fully explained and corrected.

In the North American Phyllostictas, under *Phyllosticta destruens*, add 2676 to the N. A. F. reference, and under *P. vulgaris* cancel the Syn. *Phoma virginiana* and the reference to N. A. F. 2830.

PUCCININA CIRCINANS E. & E.—Bull. Torr. Bot. Club. Feb. 1900, p. 61.

Change this to *Puccinia chasmatis* E. & E. There is already a *Puccinia circinans* Fckl. Symb. p. 53.

VENTURIA RUBICOLA E. & E.—On dead canes of *Rubus occidentalis*, Tacoma Park, D. C. Oct. 1900. (C. L. Shear, 903.)

Perithecia thickly scattered; subcuticular, membranaceous, or rather coarse cellular texture, pierced above, 80-110 μ diam., tardily rupturing the cuticle and suberumpent, finally collapsing, surrounded by a ring or fringe of short, black continuous bristles mostly a little curved, 20-40x3 μ . Ascii sessile apophysate, oblong, 50-60x10-12 μ . Sporidia crowded-biseriate, oblong-elliptical, biguttulate (becoming unseptate?) hyaline, 12-15x6-8 μ .

Differs from *V. kunzei* Sacc. on *Rubus caesius* in its caulicolous growth and large ascospores.

HYPOCOPRA KANSENSIS E. & E.—On cow dung. Rooks Co., Kansas. May 1901. (Bartholomew, 2871.)

Perithecia ovate, $\frac{3}{4}$ -1 mm. high, $\frac{1}{2}$ - $\frac{3}{4}$ mm. broad, entirely sunk in the stroma except the erumpent, hemispherical, soon perforated ostiola; stroma 1-2 mm. diam., black on the surface, inside about the same color as the matrix, slightly convex, often confluent for 1 cm. or more. Ascii cylindrical, p. sp., 200-230 x 25-30 μ , thin, septate; sporidia obliquely; paraphyses stout, 4-5 μ

uniseriate, elliptical, hyaline at first, becoming opaque, slightly narrowed at the ends, $40-52 \times 18-22 \mu$.

Differs from *H. fimetii* Pers. in its much larger sporidia.

ROSELLINIA BIGELOVII E. & E.—Am. Nat. 341. 1897. N. A. F. 3520. When this was published the fact that the sporidia are compressed was overlooked. From careful re-examination of the original species we give a revised measurement of the sporidia $6-9$ (mostly $7-8$) $\times 4-5\frac{1}{2} \mu$, and about $3\frac{1}{2} \mu$ thick.

What is evidently the same thing has since been found on dead stems of *Amorpha fruticosa*, Rooks Co., Kans. (Bartholomew, 2928). On this host the sporidia are somewhat larger, $8-10\frac{1}{2} \times 5-5\frac{1}{2} \mu$, and rather more distinctly compressed ($3-3\frac{1}{2} \mu$ thick). Specimens from the same locality and collector on *Negundo aceroides* have sporidia $8-10 \times 4-5$, 3μ thick. The perithecia on these hosts are ovate-globose, here and there densely crowded and subconfluent, and range from $250-350 \mu$ diam. Ostium papilliform or conic-papilliform.

CUCURBITARIA ARIZONICA E. & E.—On dead branches of *Acacia grayii*, Tucson, Arizona, June, 1891. (David Griffiths).

Perithecia erumpent-superficial, in patches $\frac{3}{4}$ mm. in extent, or thickly scattered, globose, brownish-black, about $\frac{1}{2}$ mm. diam., with a papilliform ostium, collapsing but not deeply. Ascii cylindrical, p. sp. $75-80 \times 12 \mu$, short-stipitate, paraphysate. Sporidia mostly obliquely uniseriate, oblong-elliptical, 3-septate and submuriform, slightly constricted at the middle septum, straw-yellow becoming dark brown, $14 \times 6-8 \mu$.

PLEOSPORA ALISMATIS E. & E.—On dead stems of *Alisma plantago*. South Dakota (David Griffiths).

Perithecia scattered, erumpent and hemispheric-prominent, or strongly convex, about 200μ diam. Ascii clavate-cylindrical, short stipitate, $90-100 \times 12-15 \mu$, with abundant filiform paraphyses. Sporidia uniseriate or partially biseriate above, fusoid-oblong, inequilateral, 7-9-septate, one or more of the cells divided by a partial longitudinal septum, $22-77 \times 10-12$ (exceptionally 15) μ .

The distinctly inequilateral sporidia attenuated towards each end are characteristic.

PHYSALOSPORA LEPACHYDIS E. & E.—On living but partly faded leaves of *Lepachys columnaris*. Billings, Montana, Aug. 1898. (Williams & Griffiths).

Perithecia epiphyllous, gregarious, semi-erumpent, about $\frac{1}{4}$ mm. diam., with a papilliform ostium soon perforated. Ascii cylindrical, short-stipitate, paraphysate, $60-65 \times 8$, or when the sporidia are partly biseriate, $10-12 \mu$ broad. Sporidia mostly uniseriate, elliptical with the ends broadly rounded, often with two large nuclei, $10-12 \times 5-6 \mu$.

PHYSALOSPORA MINIMA E. & E.—On dead canes of *Rubus strigosus*. Tuskegee, Ala. (Prof. G. W. Carver).

Perithecia evenly scattered, subcuticular, the minute ostiolum barely rupturing the epidermis, small ($80-90 \mu$). Ascii oblong-clavate, short-stipitate, paraphysate, $40-50 \times 6 \mu$. Sporidia irregularly crowded in the asci, elliptical, mostly narrowed at the ends, $9-11 \times 3-4 \mu$.

Smaller in all parts than *P. vagans* E. & E. var. *rubi* on the same host.

PLEOSPORA KAN^SE^SN^SIS E. & E.—On dead stems of *Melilotus alba*. Rooks Co., Kansas, June, 1901. (Bartholomew, 2888).

Perithecia scattered, subcutaneous, ovate-globose $\frac{1}{4}-\frac{1}{2}$ mm. diam., raising the closely appressed cuticle into pustules pierced at the apex by the conical or short-cylindrical ostiolum, finally collapsing to cup-shaped. Ascii clavate, rounded above, gradually narrowed below to the short, nodular stipe-like base; paraphyses stout (3μ thick), septate, hyaline; sporidia biseriate, oblong-obovate, rounded above, narrowed below and bent a little to one side, 5-6-septate, with a longitudinal septum more or less distinct running through 2 or 3 of the middle cells, slightly constricted in the middle, bright straw-yellow, $20-22 \times 7-9 \mu$.

This comes very near *P. meliloti* Rabh. on the same host, but the shorter clavate ascii, the smaller sporidia and short-cylindrical ostiolum may perhaps separate it. *P. dura* Niessl has larger perithecia which do not collapse.

LEPTOSPHÆRIA ASTERICOLA E. & E.—On dead stems of *Aster multiflora*. Rooks County, Kansas, June, 1901. (Bartholomew, 2885).

Perithecia erumpent-superficial, globose, becoming depressed or collapsing to cup-shaped, subseriatelv arranged, sometimes 2-3 confluent, ostiolum papilliform, more distinct in the collapsed perithecia. Ascii subcylindrical, short-stipitate, paraphysate, $80-110 \times 7-8 \mu$; sporidia biseriate, fusoid, slightly curved, 3-septate, not constricted, straw-colored, $30-40 \times 3-4 \mu$. Pycnidial perithecia resembling the ascigerous but not collapsing, sporules oblong or oblong-elliptical, hyaline, $6-8 \times 2\frac{1}{2}-3 \mu$, uniseptate.

Allied to *L. fusipora* Niessl and *L. leptospora* DeNot., but both have much shorter, broader sporidia and the latter has the pycnidial spores continuous.

METASPHÆRIA SUBSERIATA E. & E.—On dead culms of *Panicum virgatum*, Rooks County, Kansas, March, 1901. (E. Bartholomew, 2841).

Perithecia buried in the unchanged substance of the culm, raising the epidermis into distinct pustules pierced by the papilliform ostiolum, depressed-globose, $\frac{1}{2}-\frac{1}{2}$ mm. diam., scattered

singly or arranged in short series and covered by the blackened epidermis, then more or less confluent. Asci cylindrical, sessile, obscurely paraphysate, $60-75 \times 6-7 \mu$, mostly curved; sporidia biseriate, fusoid, curved, faintly 1-3-septate, not constricted, yellowish-hyaline, $30-35 \times 2\frac{1}{2}-3 \mu$.

In the species examined most of the sporidia showed only one septum across the middle, but in some two additional septa were visible.

MELANCONIS (*MELANCONIELLA*) *nyssægena* E. & E.—On dead limbs of *Nyssa multiflora*, Newfield, N. J., October 23, 1900.

Stroma cortical, formed of the scarcely altered substance of the bark, circular, depressed-globose, about 2 mm. diam., raising the bark into little pustules which are ruptured at the apex by the fascicle of black, smooth, rounded ostiola. Perithecia circinate, globose, black and shining inside, about $\frac{1}{2}$ mm. diam., sporidia uniseriate, elliptical or oblong-elliptical, uniseptate and constricted, becoming olive-brown, $30-40 \times 12-20 \mu$ (mostly $12-15 \mu$).

PHYLLACHORA SERIALIS E. & E.—On *Spartina stricta*. Pacific Grove, Cal. July, 1900. (Robt. M. Horner, 1487).

Stroma seriate between the nerves of the leaf, punctiform and buried at first, then suberumpent and more or less confluent for 2-3 mm. The separate stromata are about $\frac{1}{2}$ mm. in diam., and the ascigerous cells remain sunk in the parenchyma of the leaf. Asci densely fasciculate, clavate-cylindrical, short-stipitate, $75-80 \times 12-15 \mu$. Sporidia obliquely uniseriate or subbiserrate, ovate, hyaline, continuous, $10-12 \times 5-6 \mu$.

BOTRYOSPHÆRIA HYSTERIOIDES E. & E.—On leaves of *Hesperaloe dayi*, Peyotes, Mexico. April 27, 1900. (Dr. Wm. Trelease).

Spots oblong-elliptical, soon confluent for 10 or more cm., reddish-brown, becoming greyish-white with a reddish-brown border. Perithecia globose $200-300 \mu$ diam., lying 2-4 together in a narrow hysteriform stroma acute at each end, and $\frac{1}{2}-\frac{3}{4}$ mm. long, covered by the thin, whitened epidermis which is soon ruptured by the obscurely papilliform ostiolum. Asci broad clavate oblong, $75-100 \times 25-30 \mu$, contracted below into a short stipite-like base; paraphyses inconspicuous and obscure. Sporidia oblong, slightly narrowed at the ends, with granular contents, with or without a large vacuole, hyaline with a slight yellowish tinge, $25-30 \times 8-12 \mu$.

On the same spots are scattered perithecia with sporules of the *Diplodia* type, $5-7 \times 4-5 \mu$ (*Diplodia hesperaloae* E. & E.); Others with globose, brown, continuous, $6-7 \mu$ sporules (*Coniothyrium* sp.), others again with oblong or subcylindrical, hyaline, 3-5 (mostly 3-) septate sporules $60-80 \times 8-12 \mu$ (*Phleospora*

minor E. & E.) These three forms of stylospores are apparently generically connected with the ascigerous form. This last mentioned may be only a more mature stage of growth of *Septoria megaspora* Speg. which is described as having uniseptate spores and perithecia not on spots. The fungus on *Hesperaloe* has typically 3-septate spores and the spotted leaves are very conspicuous. Dr. Trelease has sent on *Agave* sp. from Mexico, a fungus that in some respects comes nearer Spegazzini's plant but in this, too, the spores are 6-8-septate. *Septoria megaspora* Speg. seems more properly a Phleospora.

DOTHIDEA YUCCÆ E. & E.—(*Phyllachora yuccæ* E. & E. Torr. Bull. 22:440. 1895.) On leaves of *Yucca angustifolia*, Manitou, Colorado. July, 1895. (Prof. E. T. Harper, 474).

Stromata gregarious amphigenous, small, sunk in the substance of the leaf and covered by epidermis which is soon ruptured, mostly oblong, $\frac{1}{2}$ - $\frac{1}{2}$ x $\frac{1}{2}$ mm., surrounding and blackening the leaf for $\frac{3}{4}$ cm. in extent, the adjacent parts of the leaf being entirely free from the fungus. Ascigerous cells numerous, small. Asci oblong-cylindrical, 75-80 x 10-12 μ . Sporidia mostly biserrate, ovate-oblong, yellow-brown, uniseptate and constricted, 12-15 x 5-6 μ .

This is evidently the mature state of the fungus cited above, the larger dimensions of the asci being due to their more perfect development.

HYSTEROGRAPHIUM NUCICOLA (Schw.) Syn. N. A. F. 2080. (*H. hians* E. & E. in Herb.)—On old hickory-nuts lying on the ground. Newfield, N. J., April 7, 1902.

Gregarious elongated $\frac{3}{4}$ -1 mm. long by nearly $\frac{1}{2}$ mm. wide, lying in various directions on the matrix, shining black, smooth, not distinctly striate, straight or curved, ends obtuse, lips distinctly gaping. Asci oblong-clavate, paraphysate, 60-70 x 12-15 μ . Sporidia ovate-oblong biserrate, hyaline, becoming dark brown, 4-6-septate, with a longitudinal septum running through 1-3 of the cells, sometimes distinctly constricted in the middle but often scarcely constricted at any of the septa, 15-22 x 6-9 μ .

In the shape of the perithecia and the partly open lips this differs from the description and specimens of *H. nucicola* Schw. in Herb. Schw. at the Acad. Nat. Sci. Philadelphia. The surface of the nut is more or less blackened around each group of perithecia but this is more like a discoloration than a crust.